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"Some Mutual Relations of Oxalates, Salts of Magnesium and Calcium: Their Concurrent and Antagonistic Actions," by F. L. Gates and S. J. Meltzer.

"A Method of Obtaining Successive Contrast of the Sensations of Hunger and Appetite," by A. J. Carlson.

"Further Observations on the Pyramidal Tracts of the Raccoon and Porcupine," by S. Simpson.

"A New Apparatus for Demonstration of the Dioptries of the Eye and the Principles of Ophthalmoscopy and Retinoscopy," by A. Woelfel.

"Simple Experiments on Respiration for the Use of Students," by Y. Henderson.

"Convenient Modification for Venous Pressure Determinations in Man," by R. D. Hooker.

"Device for Interrupting a Continuous Blast of Air. Designed Especially for Artificial Respiration," by R. A. Gesell and J. Erlanger.

"A Simple Liver Plethysmograph," by C. W. Edmonds.

"An Artificial Circulation Apparatus for Students," by W. P. Lombard.

"A Simplified and Inexpensive Oxadase Apparatus," by H. H. Bunzel.

"An Improved Form of Apparatus for Perfusion of the Excised Mammalian Heart," by M. Dresbach.

"Sugar Consumption in Eviscerated Animals," by J. J. R. Macleod and R. G. Pearce.

"On the Rapid Disappearance from the Blood of Large Quantities of Dextrose Injected Intravenously," by I. S. Kleiner and S. J. Meltzer.

"Further Observations on the Metabolism of Depancreatized Dogs," by J. R. Murlin.

"Transfusion of Blood in Severe Diabetes Mellitus," by R. T. Woodyatt and B. O. Raulston.

"The Cause of Diabetic Polyphagia," by A. B. Luckhardt.

"Preliminary Report on Work with a Respiration Calorimeter in Bellevue Hospital," by E. F. DuBois.

"The Rôle of Nascent Oxygen in Protecting the Body from Self-digestion," by W. E. Burge.

"The Effect of Castration on the Hypophysis in the Rabbit," by A. E. Livingston.

"The Secretion of Gastric Juice during Parathyroid Tetany," by R. W. Keeton.

"The Brain-Adrenal-Thyroid-Liver-Pancreas Syndrome (Kinetic System)," by G. W. Crile.

"The Variations in the Hunger Contractions of the Empty Stomach with Age," by T. L. Patterson.

"The Control of the Hunger Mechanism," by A. J. Carlson.

The following persons were elected to membership in the society: E. F. DuBois, Cornell University Medical School; O. C. Glaser, University of Michigan; E. M. Ewing, Bellevue Medical School; S. Tashiro, University of Chicago; A. L. Tatum, University of Chicago; H. Laurens, Yale University; J. E. Sweet, University of Pennsylvania; E. Lodholz, University of Pennsylvania; G. Fahr, Johns Hopkins Medical School; J. H. King, Johns Hopkins Medical School; R. E. Gesell, Washington University, St. Louis; O. O. Stoland, University of South Dakota; E. L. Porter, Harvard Medical

School; P. E. Howe, Columbia University; H. A. Mattill, University of Utah; Mabel P. FitzGerald, New York City.

This makes the total membership of the society 210.

The most important matter in the way of business was the ratification of the work of the conference committee appointed at the Cleveland meeting establishing the Federation of American Societies for Experimental Biology. One of the aims of this federation is the coordination of the scientific work of the annual meetings, a successful beginning of which was made this year. But a great deal of the credit for this successful beginning is due to the splendid facilities offered by the Philadelphia institutions, and the careful planning and hard work of the local committee.

The Washington University presented an invitation to meet in St. Louis next year. The society voted in favor of meeting in St. Louis, but the final decision is left with the executive committee of the federation.

The editorial committee (Drs. Porter, Carlson, Erlanger, Howell, Lee, Lusk, Macallum) was instructed by the society to report at the next annual meeting on the relation of the *American Journal of Physiology* to the American Physiological Society and to propose measures to improve the facilities for publication on the part of American physiologists.

Officers for the year 1914.—*President*, W. B. Cannon; *Secretary*, A. J. Carlson; *Treasurer*, J. Erlanger; *Members of the Council*, F. S. Lee, S. J. Meltzer.

A. J. CARLSON,
Secretary

UNIVERSITY OF CHICAGO,
January 10, 1914

THE AMERICAN PHYTOPATHOLOGICAL SOCIETY

THE society met in affiliation with the American Association for the Advancement of Science in the state capitol at Atlanta, Ga., December 30, 1913, to January 2, 1914.

The following officers were elected:

President, Dr. Haven Metcalf, U. S. Department of Agriculture, Washington, D. C.

Vice-president, Dr. Frank D. Kern, Pennsylvania State Agricultural Experiment Station, State College, Pa.

Member of Council, Dr. H. R. Fulton, North Carolina Agricultural Experiment Station, West Raleigh, N. C.

Chief editors of *Phytopathology* were elected as follows: Dr. L. R. Jones, for one year; Dr. C. L.

Shear, for two years; Dr. R. A. Harper, for three years.

The following associate editors were elected for three years: Dr. F. D. Heald, Dr. Mel T. Cook, Dr. B. M. Duggar, Professor F. C. Stewart.

Dr. Donald Reddick was reelected business manager of *Phytopathology*.

About fifty members were in attendance.

The society decided to hold its next meeting in conjunction with the American Association for the Advancement of Science at Philadelphia, Pa.

The following program was presented by abstract, the abstracts having been published and distributed before the meeting. This plan was undertaken in an attempt to devise some means of securing time to discuss the numerous papers which are offered for presentation. These abstracts were read by the authors and formed the basis of questions and discussions. The plan was generally pronounced a great success, as it resulted in rather a full discussion of almost every paper presented.

"Fruit Rots of Egg Plant," by Frederick A. Wolf.

"Formaldehyde Gas Injury to Potato Tubers," by F. C. Stewart and W. O. Gloyer.

"Stem Rot and Leaf Spot of *Clematis*," by W. O. Gloyer.

"A Preliminary Note on the Cause of 'Pecky' Cypress," by W. H. Long.

"Inspection and Certification of Potato Seed Stock," by W. A. Orton.

"The Fungus Genus *Verticillium* in Its Relation to Plant Diseases," by W. A. Orton.

"A Phoma Rot of Irish Potatoes," by I. E. Melhus.

"A New Rust of Economic Importance Occurring on Pomaceous Hosts," by H. S. Jackson.

"Notes on the White Pine Blister Rust," by Perley Spaulding.

"Relation of the Mosaic of the Pepper and the Filiform Leaf of the Tomato to the Mosaic of the Tobacco," by Carl A. Schwarze.

"*Cladosporium* Disease of *Ampelopsis tricuspidatum*," by Mel T. Cook and Guy West Wilson.

"The Use of Sulphur Lime Wash as a Remedy for Apple Scab," by R. Kent Beattie.

"Cotton Anthracnose. Some Field Problems and Some Field Experiments," by H. R. Fulton, J. R. Winston and R. O. Cromwell.

"Can *Cronartium ribicola* Overwinter on the Currant," by F. C. Stewart and W. H. Rankin.

"An Improved Method of Making Separation Cultures," by A. F. Blakeslee.

"Collar-blight of Apple Trees in Pennsylvania," by C. R. Orton and J. F. Adams.

"Fusaria of Potatoes," by C. D. Sherbakoff.

"Some Points in the Life History of *Phytophthora* on Ginseng," by J. Rosenbaum.

"Comparative Dusting and Spraying Experiments," by F. M. Blodgett.

"*Sphaeropsis* Canker of *Quercus prinus*," by W. H. Rankin.

"Biological Strains of *Sphaeropsis malorum*," by L. R. Hesler.

"Decay of Celery in Storage," by D. Reddick.

"A Destructive Nematode Introduced into the United States," by L. P. Byars.

"Experiments on the Control of Certain Barley Diseases," by A. G. Johnson.

"Some Observations and Experiments on the Black-leg of Cabbage," by M. P. Henderson. (With lantern.)

"The Non-validity of the Genus *Lasiodiplodia*," by J. J. Taubenhause.

"Progress in Developing Disease Resistant Cabbage," by L. R. Jones. (With lantern.)

"Disease Resistance in Tobacco to Root Rot," by James Johnson. (With lantern.)

"The Life History of *Sphaeropsis malorum* Berk.," by C. L. Shear. (With lantern.)

"Blossom-end Rot of Tomato," by Charles Brooks. (With lantern.)

"A Little-known Disease of Chestnut and Oak Trees," by F. D. Heald. (With lantern.)

"A Preliminary Report on Fruit Infection of the Peach by Means of Inoculation with *Cladosporium carpophilum* Thum. from Peach Twigs," by G. W. Keitt. (With lantern.)

"Bibliographical Citations," by C. L. Shear.

"Some Recent Studies on New or Little-known Diseases of the Sweet Potato," by J. J. Taubenhause. (With lantern.)

"Wind Dissemination of Ascospores of the Chestnut Blight Fungus," by F. D. Heald, M. W. Gardner and R. A. Studhalter. (With lantern.)

"Longevity of Pycnosporos of the Chestnut Blight Fungus in Soil," by M. W. Gardner.

"The Relation of Temperature to the Expulsion of Ascospores of *Endothia parasitica*," by R. C. Walton.

"Insects as Carriers of the Chestnut Blight Fungus," by R. A. Studhalter.

"Perithecia in Cultures of *Venturia inequalis*," by Fred R. Jones.

"Gum Formation in *Citrus* as Induced by Chemicals," by B. F. Floyd.

"A Study of the Annual Recurrence of *Phytophthora infestans*," by I. E. Melhus.

"Fungous Gummosis of *Citrus* in California," by H. S. Fawcett.

C. L. SHEAR,
Secretary-Treasurer

THE PALEONTOLOGICAL SOCIETY

THE fifth annual meeting of the Paleontological Society was held at Princeton, N. J., on Wednesday, December 31, 1913, and Thursday, January 1, 1914, in affiliation with the Geological Society of America. The meeting this year included a general session in which selected papers of interest to all members of the society were read, and special sessions dealing with vertebrate and invertebrate paleontology and paleobotany. Notable features of the meeting were first, the president's address by Dr. Charles D. Walcott on the Cambrian of western North America, and second a conference on the close of the Cretaceous and opening of Eocene time. In the latter the geological and paleontological evidence was presented by Messrs. F. H. Knowlton and T. W. Stanton, and recent discoveries in regard to late Cretaceous and early Eocene life were reported especially as a result of the American Museum expeditions under Messrs. Barnum Brown and Walter Granger.

A new Ungulate of very distinctive South American type was recorded by Dr. Matthew as additional evidence of affinity between North and South America in Lower Eocene times. The line of ancestry of the uinatheres was recorded as traced into Basal or Paleocene times. A new fauna is described between the Puerco-Torrejon and Wasatch, to be known as the Clark Fork. Still more striking was the record of Mr. J. W. Gidley, of the U. S. National Museum, of the occurrence of a true eland *Taurotragus* in the Pleistocene cave of western Maryland. This discovery confirms the statement of J. C. Merriam of the occurrence of African antelopes in Virgin Valley, northern Nevada and links North America very closely to Asia in Pliocene times. Accompanying the eland was a peculiar species of African dog.

R. S. BASSLER,
Secretary

SOCIETIES AND ACADEMIES

THE BIOLOGICAL SOCIETY OF WASHINGTON

THE 516th meeting of the society was held on November 15, 1913, Vice-president Paul Bartsch in the chair and 35 persons present.

F. V. Coville presented a communication on

"The Physiology of the Blueberry." His remarks were based on wide experience in greenhouse and outdoor culture of this plant. Three conditions are essential to its successful propagation: first, an acid soil; second, the presence of the micorrhizal fungus to enable the plant to obtain nitrogen, and third, the stimulating effect of cold on the twigs while they are dormant. The last is a condition of vital importance, associated as it is with the transformation of starch into sugar. As a result of this series of experiments, the commercial propagation of the blueberry is now possible. Very large berries have been developed, some of them from $\frac{1}{2}$ inch to $\frac{3}{4}$ inch in diameter. The various means of cultivation were explained and illustrated by means of numerous lantern slides.

W. C. Kendall, the second speaker announced on the program, was absent, and the chairman asked Dr. Leon J. Cole, of the University of Wisconsin, to address the society. He responded by giving an account of his experiments in breeding pigeons for the study of color inheritance.

Owing to lateness, the communication by Barton W. Evermann was postponed.

THE 517th meeting of the society was held on November 29, 1913, President E. W. Nelson in the chair and 63 persons present.

The meeting was devoted to a discussion of Parallel Development. A. D. Hopkins read a paper on "Parallelism in Morphological Characters and Physiological Characteristics in Scolytoid Beetles." He had made a special study of these beetles and his ideas of parallelism in nature were largely founded on evidence they have furnished. He defined the subject as follows:

"Parallelism in morphological characters and physiological characteristics in Scolytoid beetles relates to the occurrence of the same or similar elements of structure or the same kind of activity in two or more species, genera, subfamilies or families. Parallel species, genera and larger groups are those in which structure or habit is in many respects alike. Such species or groups may be closely allied or more or less widely separated. Universal parallelism relates to repeated or multiple origin, development and evolution of the same or similar inorganic or organic form or activity.

"This tendency towards parallel development appears to be in accordance with a fundamental principle or law of *parallelism in evolution*, under which the origin and evolution of the same form or activity, under the same or similar physical in-